Amendments to the Drawings

Attached is a replacement drawing sheet for amended Figures 3(A)-3(D).

REMARKS

The abstract has been amended in order to address the Examiner's objection and correct grammatical and idiomatic errors contained therein. No new matter has been added. The specification has been amended in order to correct grammatical and idiomatic errors contained therein. No new matter has been added.

As requested by the Examiner, Figures 3(A)-3(D) have been amended so that they are indicated as being "PRIOR ART". A corrected drawing is enclosed herewith for the Examiner's approval. No new matter has been added.

In order to expedite the prosecution of the present application, Claim 1 has been canceled and replaced by newly presented Claims 2-5 which more particularly point out and distinctly claim the subject matter which Applicants regard as the invention. No new matter has been added.

With respect to the rejection of Claim 1 under 35 USC 112, second paragraph, it is respectfully submitted that the currently presented claims are cured of all formal defects.

Claim 1 has been rejected under 35 USC 102(b) as being anticipated by JP 2000-158447 (JP '447). Applicants respectfully traverse this ground of rejection and urge reconsideration in light of the following comments.

The presently claimed invention is directed to a tire vulcanizing apparatus which comprises tire loading means for loading a green tire at a tire loading position and moving the green tire to a tire supply position, tire elevating means for removing the green tire from the tire loading means, raising the green tire and lowering the green tire into a lower mold at the tire supply position, a lower mold for receiving the green tire at the tire supply position and moving the green tire to a tire vulcanization position, an upper mold for lowering onto the lower mold containing the green tire, vulcanizing the green tire therebetween and raising the vulcanized tire from the lower mold at the tire vulcanization

position, and movement means for simultaneously moving the tire loading means and the lower mold in a reciprocating manner between the respective positions. The tire loading means and the lower mold are integrally connected with each other.

As discussed in the present specification, JP '447 discloses a tire vulcanization apparatus which works as shown in Figures 3(A)-3(D). This prior art apparatus is discussed on pages 1-3 of the present specification. The vulcanizing apparatus of JP '447 comprises a tire supplying apparatus 80 which receives a green tire T at a tire receiving position M1, a cradle 81 which moves the received green tire to a tire supplying position M2, a tire elevating apparatus 83 which lowers onto the cradle 81, removes the green tire therefrom by raising and then places the green tire in a lower mold 82, and an upper mold 84 which lowers onto the lower mold 82 at a tire vulcanizing position M3 and raises from the lower mold containing a vulcanized tire. This structure is provided with a moving unit such that the cradle and the lower mold, which are integrally connected, reciprocate between the tire supply position M2 and the tire vulcanizing position M3 simultaneously when the cradle 81 is moved between the tire receiving position M1 and the tire supplying position M2.

In the vulcanizing apparatus of JP '447, the green tire T is supplied to the cradle 81 from the tire supplying apparatus 80 at the same time the green tire T is placed on the lower mold 82 by the tire elevating apparatus 83 and the lower mold 82 is moved to the tire vulcanizing position M3 from the tire supplying position M2 after the green tire is placed on the lower mold and the cradle 81 is moved to the tire supplying position M2 from the tire receiving position M1 during the vulcanization step.

However, during the vulcanization step, the cradle 81 does not contain a green tire and is in a passive state. Therefore, when the cradle 81 is provided, a tire supplying apparatus 80 receiving the green tire at an upper position and

transferring the green tire to a cradle at a lower position is also required as an essential element in the operation of the tire supplying apparatus. Additionally, it is also necessary to move the cradle in correspondence with an elevating timing of the tire supplying apparatus 80, and the movement timing of the lower mold 82, which forms the moving unit 8 together with the cradle 81, is affected. Therefore, an influence is generated in a motion timing of the tire elevating apparatus which sets the green tire onto the lower mold 82 and the upper mold 84 which vulcanizes and molds the green tire with respect to the lower mold 82. A problem arises in that the amount of time lost during the process is increased such that it is necessary to provide an extended waiting time during the use of this apparatus.

The present invention overcomes the problems associated with the prior art by providing a tire vulcanizing apparatus which reduces the time loss and efficiently vulcanizes and molds by excluding the cradle and the tire supplying apparatus by employing a tire loading apparatus for positively loading the green tire and forming a moving unit in which the tire loading apparatus and the lower mold are integrally connected. It is respectfully submitted that JP '447 does not disclose the presently claimed invention and, as such, the presently claimed invention clearly is patentably distinguishable thereover.

The Examiner is respectfully requested to reconsider the present application and to pass it to issue.

Respectfully submitted,

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TFC/smd